**Information Builders**®

# Web390 for VM

## *Access Legacy Data and 3270 Applications From the Web*

Web390 is a full-function, VM-based HTTP Web server that offers secure access to traditional VM/CMS applications from any Web browser – without changing the 3270 applications or installing terminal-emulation software. It provides CGI support enabling developers to write programs in REXX, COBOL, C, Assembler, or other common languages to expand the functionality of mainframe-based production systems by enabling them for the Web.  The Web390 Server integrates easily with other software from Information Builders, allowing developers to create powerful new Web applications that can access operational data throughout the enterprise.

Web390 adheres to the Internet Hypertext Transfer Protocol (HTTP) and TCP/IP standards, and provides secure access to 3270 sessions from Web browsers through implementation of the industry-standard SSL security protocol.
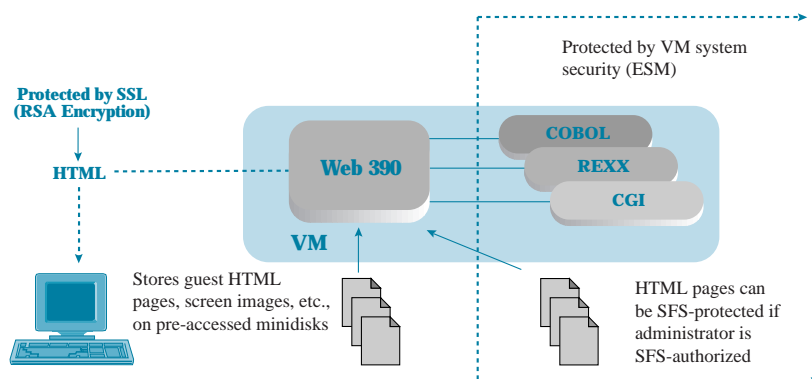
Whether rejuvenating existing applications or creating new ones, Web390 enables mainframe sites to exploit the traditional performance, storage, and I/O advantages of VM while delivering unmatched availability with full integrity and security.

### Highlights

- Offers secure access to IBM S/390 data and applications
- Requires no changes to VM hardware, software, or data sets
- Exploits VM/Secure package and provides user exit for custom security schemes
- Supports SSL 3.0 encryption and decryption
- Offers two presentation modes for 3270 application screens on Web browsers: green-screen emulation and HTML translation, and option of defining user-written templates
- Supports Web-standard HTTP and TCP/IP protocols

### Create New Web Applications Based on Enterprise Data

The Web390 HTTP server supports all of the popular Web file formats (MIME types), including Java, HTML, VRML, and GIF and JPEG graphic files, as well as MPEG animation files. It also supports use of Common Gateway Interface (CGI) scripts written in REXX, server-side JavaScripts, or 3GL languages such as C++, Assembler, PL1, and COBOL for accessing native VM data. This broad language support facilitates rapid enhancement and exploitation of 3270 production systems on the Web.



Protected by VM system security (ESM)

Protected by SSL (RSA Encryption)

HTML

COBOL

REXX

Web 390

CGI

VM

Stores guest HTML pages, screen images, etc., on pre-accessed minidisks

HTML pages can be SFS-protected if administrator is SFS-authorized
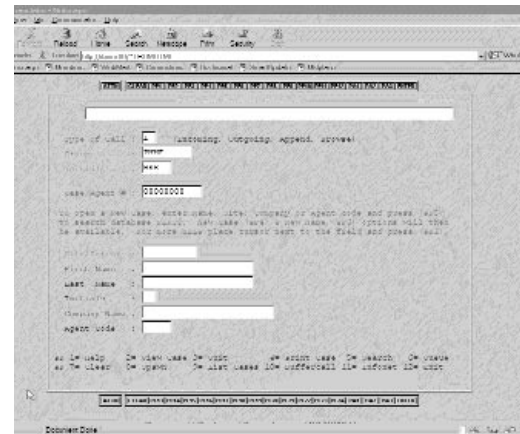
**Web390**®

Users can choose one of several presentation options at runtime. Those familiar with 3270 terminals but new to the Web can select 3270 Emulation Mode, which employs a Netscape Navigator plug-in to deliver the familiar 3270 green screens to the browser windows. Those familiar with the Web can select HTML Translation Mode, which automatically converts 3270 datastreams into HTML forms, allowing users to interact using familiar radio buttons and scrolling data entry windows.

Web390 also supports user-written templates for customizing translated screen borders and adjusting certain screen elements, such as repositioning the pfkeys. To enliven static HTML pages, developers can include dynamic HTML elements through Server-Side Include (SSI) variable substitution. Scripts written in REXX can automate Logon processing behind the scenes, or they can improve the look of 3270 applications by adding dynamic content through JavaScripts, 3GL programs, or REXX routines. The user interfaces can be customized *without changing* the underlying 3270 applications themselves.
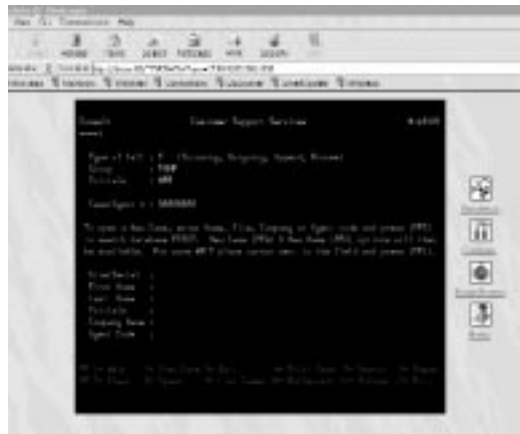
*Web390 offers 3270 green-screen emulation…*



*…or automatic translation of 3270 screens into HTML*

Web390 provides unparalleled security for processing Web transactions by:

- Authenticating USERIDs and passwords by respecting underlying ESM security packages such as VM/Secure
- Supporting SFS-style security for real and virtual users
- Providing a user exit for interfacing with nonstandard security schemes
- Controlling user access to mainframe resources at CGI level through users' security profiles
- Limiting user access by screening IP addresses
- Allowing definition of guest privileges at installation time to control access by general audiences

For securing transactions between Web browsers and the Web390 Server that go outside an organization's firewall, Web390 delivers Secure Socket Layer (SSL 2.0 and 3.0) encryption/decryption support – the industry standard for secure transfer of data and files in a TCP/IP environment. SSL works independently of Internet application protocols and, when implemented on both client and server, delivers fully secured commercial transaction processing to customers online.

Providing Web access to mainframe applications does not mean giving up control. The built-in Web390 console facility offers a wide range of functions for managing users and server operations without interrupting their sessions. The console offers a single point of control and allows administrators to:

- Display active users
- Monitor server status
- Set file mapping rules
- Change MIME extensions
- Control server operations
- Collect diagnostic information

### Web Access to All Your Transaction Data

- Direct access to VM/CMS
- Native VM/ESA Server
- Executes on a single virtual machine
- Provides modern look and feel for legacy applications
- Reduces costs of developing Web applications
- Provides centralized control of Web applications and Web activity tracking

### Three Options for Displaying Applications on the Web

- 3270 Emulation Mode
- HTML Translation Mode – 3270 datastreams converted into HTML screen forms
- HTML Translation based on user-written templates

### Web Standards, Filetypes, and Protocols Supported

- TCP/IP – IBM
- HTTP and HTTPS
- REXX and 3GL support for CGIs
- Dynamic loading of CGI modules
- Access to server-state variables from CGI scripts
- Automatic query string processing
- Server-Side Include (SSI) support

### Security Features

- Includes standard Internet security features – firewall, router, and IP mechanism
- Supports Secure Socket Layer (SSL 2.0 and 3.0)
- Offers option of requiring USERIDs and passwords, which are checked against VM security packages (ESM)
- VM Server includes user exit for custom security schemes
- Offers IP address screening using IPINCLUDE/IPEXCLUDE
- Comprehensive monitoring and control facilities

## Operational Features

- Persistent user profiles
- Full VM operator controls for MIME types with Server STOP, RESTART, CHECK ALIVE
- DISPLAY users
- On-the-fly updates of CGI engines
- Log switching
- Comprehensive trace facilities, including HTTP, HTTPS, and TCP/IP
- TIMEOUT support for canceling inactive 3270 sessions

## Logging Capabilities

- CERN/NCA common log format
- Log files are automatically cycled

**System Requirements**

- IBM S/390: VM/CMS, VM/ESA
- TCP/IP: IBM

**Web Browser Requirements**

- Any Web browser for base server function
- Netscape (3.x, or higher) or Microsoft Explorer (3.x or higher) required for (Emulation Mode) plug-in
- Browsers with JavaScript support for enhanced functions

**Installation Requirements**

- IBM-compatible PC with 2MB free disk space
- Ability to transfer binary files from the PC to the IBM mainframe

**For More Information**

Contact your local Information Builders office, visit our Web site (www.ibi.com), or in the U.S. and Canada, call (800) 969-INFO.

## Information Builders